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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,874	07/07/2003	Jae Hong Jun	P68979US0	6969

136 7590 04/04/2005

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,874

Applicant(s)

JUN ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 34-38 is/are allowed.
6) ☒ Claim(s) 1-5, 7-11, 13-17, 22, 23, 25-33 and 39-45 is/are rejected.
7) ☒ Claim(s) 3, 6, 12, 14, 18-21 and 24 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks received 15 December 2004 have been entered and overcome the objection to the title.

Claim Objections

2. Claims 3 and 14 are objected to because of the following informalities: In the last line of claim 3, it appears that the term "he" should be "the" instead.
3. In the last line of claim 14, it appears that the term "hear" should be "heat" instead. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 29 and 42-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In new claims 29, 42, and 44, applicant cites a limitation of a porous pad/material having a plurality of *micro holes* formed therein. Even though applicant's original disclosure mentions the porous pad including a foam

agent, namely a urethane foam, there is no mentioning or discussion in applicant's original disclosure of "micro holes" being included in the porous pad.

6. Thus, the Examiner notes that applicant's additional limitation of "micro holes" being including in the porous pad is considered to be **new matter**, since the additional term was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. Due to their dependency upon independent claims 42 and 44, claims 43 and 45 are also rejected for failing to comply with the written description requirement.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 29 and 42-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The term "micro holes" in claims 29 and 42-45 is a relative term which renders the claim indefinite. The term "micro holes" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

10. The term "micro" is defined as an adjective meaning very small or minute (Merriam-Webster's Collegiate Dictionary, 10th Ed.). Thus, the term "micro holes" suggests that the holes are very small or minute, which are relative terms that are not

defined by the claims; the specification does not provide a standard for ascertaining the requisite degree; and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Due to their dependency upon independent claims 42 and 44, claims 43 and 45 are deemed indefinite.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 22, 23, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Seki (US 6,737,790).

13. Regarding independent claim 1, Fig. 18 of Seki shows a plasma display panel comprising a display panel (210) for displaying a picture and a porous pad (205) provided at the display panel, the porous pad also including a foam agent (col. 12, ln. 14-16).

14. Regarding independent claim 22, Fig. 18 of Seki shows a plasma display device comprising a display panel (210); a frame (214) supporting the display panel; and a porous pad (205) attached between the display panel and the frame, wherein the porous pad includes a urethane foam (col. 12, ln. 14-16).

15. Regarding claim 23, Seki discloses a double-sided tape for a thermal conduction between the display panel and the porous pad (col. 12, ln. 31-43).

16. Regarding independent claim 30, Fig. 18 of Seki shows a plasma display panel comprising a display panel (210); a frame (214) supporting the display panel; a porous pad (205) between the display panel and the frame, the porous pad including a foam agent (col. 12, ln. 14-16); and a double-sided tape (col. 12, ln. 31-43) for a thermal conduction between the display panel and the porous pad.

17. Claims 42-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Isohata (US 6,288,489).

18. Regarding independent claim 42, Fig. 4 of Isohata shows a plasma display device comprising a display panel (10); a frame (17) supporting the display panel; a circuit board (11, 12) attached to the frame; a back cover (14, 15) covering the circuit board; and a porous pad (18), the porous pad having a plurality of micro holes (Fig. 6B, element 7) formed therein.

19. Regarding claim 43, Fig. 1 of Isohata shows a filter glass (21) installed on the front surface of the display panel.

20. Regarding independent claim 44, Fig. 4 of Isohata shows a plasma display device comprising a display panel (10); a frame (17) supporting the display panel; a circuit board (11, 12) attached to the frame; a back cover (14, 15) covering the circuit board; and a material (18) between the display panel and the frame for transferring heat generating from the display panel to the frame, the material having plurality of micro holes therein.

21. Regarding claim 45, Fig. 1 of Isohata shows a filter glass (21) installed on the front surface of the display panel.

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

24. Claims 1-5, 7-11, 13-17, 22, 23, 25-33, 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isohata (US 6,288,489) in view of Ebihara (US 6,794,026).

25. Regarding independent claim 1, Fig. 4 of Isohata shows a plasma display panel comprising a display panel (10) and a porous pad (18) provided at the display panel.

26. Isohata teaches the claimed limitations of independent claim 1, as discussed above, but fails to exemplify the porous pad including a foam agent.

27. Ebihara teaches that it is known in the art to provide plasma display panels with a porous pad including a foam agent provided at the display panel for distributing heat uniformly on a flat plane on which the layer is formed (col. 3, ln. 58-67 thru col. 4, ln. 1-14).

28. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the display panel of Isohata with a porous pad including a foam agent, as taught by Ebihara, for improving the heat distribution of the device.

29. Regarding claim 2, Ebihara discloses the porous pad being made of a material that absorbs noise/vibration and conducts heat (col. 3, ln. 44-60).

30. Regarding claim 3, Fig. 4 of Isohata shows a circuit board (11) mounted with a plurality of integrated circuits (col. 5, ln. 35) for applying driving signals to the display panel and a heatproof panel (17) arranged between the porous pad and the circuit board.

31. Regarding claim 4, Isohata discloses a double-faced tape having a heat-conducting function and provided between the display panel and the porous pad (col. 7, ln. 60-66).

32. Regarding claim 5, Fig. 1 of Isohata shows a filter glass (21) provided at the front side of the display panel and a Fig. 4 of Isohata shows a back cover (14, 15) covering the circuit board.

33. Regarding claim 7, Ebihara discloses the porous pad further comprising a silicon material (col. 3, ln. 57-60).

34. Regarding claim 8, Ebihara discloses the foam agent containing a urethane foam (col. 3, ln. 58).

35. Regarding claim 9, Fig. 5 of Isohata shows an adhesive (1a) coated onto the porous pad.

36. Regarding claim 10, Isohata discloses the adhesive being made from an acrylic material (col. 7, ln. 65).

37. Regarding claim 11, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the porous pad of Ebihara from a mixture containing approximately 89% silicon, approximately 10% foam agent, and approximately 1% adhesive, since where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

38. Regarding independent claim 13, Fig. 4 of Isohata shows a plasma display panel comprising a display panel (10); a frame (17) adjacent a rear surface of the display panel; a circuit board (11, 12) adjacent a rear surface of the frame and connected thereto by fastening elements (13); and a porous pad (18) positioned between the display panel and the frame. Ebihara discloses a porous pad including a foam agent, as discussed earlier for independent claim 1.

39. Regarding claim 14, Ebihara discloses the porous pad being made of a heat-conducting material that, in addition to absorbing noise/vibration, also enables the pad to transfer heat from the display panel to the frame (col. 3, ln. 44-60).

40. Regarding claim 15, Ebihara discloses the porous pad being made of a mixture of silicon and urethane (col. 3, ln. 57-60).

41. Regarding claim 16, Fig. 5 of Ebihara shows the porous pad having an outer adhesive layer (6).

42. Regarding claim 17, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the porous pad of Ebihara from approximately 89% silicon, 10% foam agent, and 1% adhesive, since where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

43. Regarding independent claim 22, Fig. 4 of Isohata shows a plasma display device comprising a display panel (10); a frame (17); and a porous pad (18) attached between the display panel and the frame. Ebihara disclose a porous pad including a urethane foam, as discussed earlier for independent claim 1.

44. Regarding claim 23, Isohata discloses a double-sided tape for thermal conduction between the display panel and the porous pad (col. 7, ln. 60-66).

45. Regarding claim 25, Ebihara discloses the porous pad further comprising a silicon material (col. 3, ln. 57-60).

46. Regarding claim 26, Fig. 5 of Isohata shows an adhesive coating (1a) on the porous pad.

47. Regarding claim 27, Isohata discloses the adhesive being made from an acrylic material (col. 7, ln. 65).

48. Regarding claim 28, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the porous pad of Ebihara with a percentage of silicon material greater than the percentage of urethane foam, since where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

49. Regarding claim 29, the porous pad of Ebihara inherently includes a plurality of micro holes therein, since it includes the foam agent also included in the porous pad of the instant application.

50. Regarding independent claim 30, Fig. 4 of Isohata shows a plasma display device comprising a display panel (10); a frame (17); a porous pad (18) between the display panel and the frame; and a double-sided tape (1a) for a thermal conduction between the display panel and the porous pad. Ebihara discloses a porous pad including a foam agent, as discussed earlier for independent claim 1.

51. Regarding claim 31, Ebihara discloses the porous pad including a silicon material and a urethane foam (col. 3, ln. 57-60).

52. Regarding claim 32, Fig. 5 of Ebihara shows the porous pad further including an adhesive (6).

53. Regarding claim 33, Ebihara discloses the adhesive being made from an acrylic material (col. 5, ln. 64).

54. Regarding independent claim 39, Fig. 4 of Isohata shows a plasma display device comprising a display panel (10); a frame (17); a porous pad (18) between the

display panel and the frame. Ebihara discloses a porous pad including a urethane foam and a silicon material, as discussed earlier.

55. Regarding claim 40, Fig. 5 of Isohata shows the porous pad including an adhesive (1a).

56. Regarding claim 41, Isohata discloses the adhesive being made from an acrylic material (col. 7, ln. 65).

Allowable Subject Matter

57. Claims 34-38 are allowed.

58. Claims 6, 12, 18-21, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

59. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 6, 18, 19, and 24, the prior art of record neither shows or suggests a plasma display panel comprising, in addition to the limitations of claim 5, a second porous pad provided between the circuit board and the back cover. Due to their dependency upon claims 6 and 19, claims 12, 20, and 21 are also allowable.

60. Regarding independent claim 34, the prior art of record neither shows or suggest a plasma display device comprising, in addition to other limitations of the claim, a porous pad located between the circuit board and the back cover, the porous pad including a foam agent. Due to their dependency upon independent claim 34, claims 35-38 are also allowable.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

61. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

62. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
26 March 2005


Vip Patel
Primary Examiner
Art Unit 2879